

Amendments to the Claims:

1. (Currently Amended) A method comprising:

generating a residual signal from a multicarrier signal, the residual signal representing a difference between the multicarrier signal and a hard-clipped multicarrier signal;

applying a least squares function to the residual signal for at least one carrier of the ~~multi-carrier~~ multicarrier signal, thereby generating a minimized residual signal for each of the at least one carrier;

filtering the minimized residual signals; and

combining the filtered minimized residual signals and the multicarrier signal.

2. (Canceled).

3. (Currently Amended) A method according to claim 1 further comprising delaying the multicarrier signal, wherein combining the filtered minimized residual signals and the multicarrier signal comprises combining the filtered minimized residual signals and the delayed multicarrier signal ~~is combined with the minimized residual signal~~.

4. (Previously Presented) A method according to claim 1, wherein the generating the residual signal includes clipping the multicarrier signal to a predetermined level to thereby generate the hard-clipped multicarrier signal.

5. (Currently Amended) A method according to claim [[2]] 1, wherein the filtering comprises complex filtering.

6-7. (Canceled).

8. (Currently Amended) An apparatus comprising:

a generator configured to generate a residual signal from a multicarrier signal, the residual signal representing a difference between the multicarrier signal and a hard-clipped multicarrier signal;

an applying unit configured to apply a least squares function to the residual signal for at least one carrier of the ~~multi-carrier~~ multicarrier signal, thereby generating a minimized residual signal for each of the at least one carrier;

at least one filter, the at least one filter configured to filter the minimized residual signals; and

a combining unit configured to combine the filtered minimized residual signals and the multicarrier signal.

9. (Canceled).

10. (Currently Amended) Apparatus according to claim [[9]] 8, further comprising a delaying unit configured to delay the multicarrier signal, wherein the combining unit is configured to combine the filtered minimized residual signals and the multicarrier signal by combining the filtered minimized residual signals and the delayed multicarrier signal is

~~combined with the minimized residual signals.~~

11. (Currently Amended) Apparatus according to claim ~~[[9]]~~ 8, wherein the generator includes a clipper configured to clip the multicarrier signal to a predetermined level to thereby generate the hard-clipped multicarrier signal.

12. (Currently Amended) Apparatus according to claim ~~[[10]]~~ 8, wherein the at least one filter comprises a complex filter.

13-14. (Canceled).

15. (Currently Amended) A system comprising:  
a transmitter apparatus configured to reduce a peak-to-mean ratio of a ~~multi-carrier~~ multicarrier signal;

a generating unit configured to generate a residual signal from a multicarrier signal, the residual signal representing a difference between the multicarrier signal and a hard-clipped multicarrier signal;

an applying unit configured to apply a least squares function to the residual signal for at least one carrier of the ~~multi-carrier~~ multicarrier signal, thereby generating a minimized residual signal for each of the at least one carrier;

at least one filter, the at least one filter configured to filter the minimized residual signals; and

a combining unit configured to combine the filtered minimized residual signals and

the multicarrier signal.

16. (Previously Presented) The system according to claim 15, wherein said generating unit, said applying unit and said combining unit are implemented in a Global System for Mobile communications (GSM) Enhanced Data rates for GSM Evolution (EDGE) mobile communication system.

17. (Currently Amended) An apparatus comprising:

generating means for generating a residual signal from a multicarrier signal, the residual signal representing a difference between the multicarrier signal and a hard-clipped multicarrier signal;

applying means for applying a least squares function to the residual signal for at least one carrier of the ~~multi-carrier~~ multicarrier signal, thereby generating a minimized residual signal for each of the at least one carrier;

filtering means for filtering the minimized residual signals; and

combining means for combining the filtered minimized residual signals and the multicarrier signal.

18. (Currently Amended) A system comprising:

transmitting means for reducing a peak-to-mean ratio of a multicarrier signal;

generating means for generating a residual signal from the multicarrier signal, the residual signal representing a difference between the multicarrier signal and a hard-clipped multicarrier signal;

applying means for applying a least squares function to the residual signal for at least one carrier of the ~~multi-carrier~~ multicarrier signal, thereby generating a minimized residual signal for each of the at least one carrier;

filtering means for filtering the minimized residual signals; and

combining means for combining the filtered minimized residual signals and the multicarrier signal.

19-24. (Canceled).

25. (Currently Amended) The method according to claim 5, wherein the complex filtering comprises applying at least one of a matrix function, a sampling function, a filter, ~~and~~ or an interpolation function to the at least one minimized residual signal.

26. (Currently Amended) The apparatus according to claim 12, wherein the complex filter comprises at least one of a matrix function, a sampling function, a filter, ~~and~~ or an interpolation function.

27. (New) The method according to claim 1, wherein combining the filtered minimized residual signals and the multicarrier signal comprises adding the filtered minimized residual signals to the multicarrier signal.

28. (New) The method according to claim 1, wherein generating a minimized residual signal for each of the at least one carrier comprises generating a set of impulse

vectors, the number of impulse vectors in the set corresponding to the number of carriers in the multicarrier signal.

29. (New) An apparatus comprising:

a generator configured to generate a residual signal from a multicarrier signal, the residual signal representing a difference between the multicarrier signal and a hard-clipped multicarrier signal;

a least squares fitter configured to apply a least squares function to the residual signal for at least one carrier of the multi-carrier signal, thereby generating a minimized residual signal for each of the at least one carrier;

at least one filter, the at least one filter configured to filter the minimized residual signals; and

a mixer configured to combine the filtered minimized residual signals and the multicarrier signal.

30. (New) The apparatus according to claim 29, wherein the generator comprises:

a hard-clipper configured to generate a hard-clipped signal from the multicarrier signal; and

a subtractor configured to generate the residual signal by subtracting the hard-clipped signal from the multicarrier signal.

31. (New) The apparatus according to claim 29, further comprising:  
  
a delay element configured to delay the multicarrier signal, wherein the mixer is configured to combine the filtered minimized residual signals and the multicarrier signal by combining the filtered minimized residual signals and the delayed multicarrier signal.

32. (New) The apparatus according to claim 29, wherein the least squares fitter is configured to apply a least squares function to the residual signal for each carrier of the multi-carrier signal, thereby generating a set of impulse vectors, the number of impulse vectors in the set corresponding to the number of carriers in the multicarrier signal.